

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 3, 9-10, and 21 and ADD new claim 39 in accordance with the following:

1. (previously presented) A switching device for controlling a connection between at least one private computer, at least one terminal corresponding to the at least one private computer, and a shared computer that can be operated by the at least one terminal, the switching device comprising:

a connecting unit that connects in a default position each terminal to a corresponding private computer and switches a connection destination of the terminal to the at least one private computer corresponding to the at least one terminal or the shared computer when a connection switching request transmitted from the at least one terminal has been received; and

a security unit that executes, for each terminal, identification processing of data that has been received from any one terminal and output to the at least one private computer or the shared computer, the identification processing including utilizing an identifier corresponding to a connector through which the at least one terminal is connected, the identification processing enciphering a received key code via use of the identifier as an encryption key.

2. (previously presented) The switching device according to Claim 1, wherein the security unit comprises:

an enciphering unit that executes an enciphering processing local to each terminal, of data that has been transmitted from any one terminal and received by the switching device;

a first deciphering unit that executes a deciphering processing corresponding to the enciphering processing local to the at least one terminal corresponding to the at least one private computer, of the data that has been output from the switching device to any one private computer; and

a second deciphering unit that executes a deciphering processing corresponding to the enciphering processing local to the at least one terminal currently connected to the shared computer, of the data that has been output from the switching device to the shared computer.

3. (currently amended) A switching device for controlling a connection between at least one private computer, at least one terminal corresponding to the at least one private computer, and a shared computer that can be operated by the at least one terminal, the switching device comprising:

a connecting unit that connects in a default position each terminal to a corresponding private computer and switches a connection destination of the terminal to a the at least one private computer corresponding to said the at least one terminal or the shared computer when a connection switching request transmitted from said the at least one terminal has been received; and

a security unit that executes, for each terminal, identification processing of data that has been received from any one terminal and output to the at least one private computer or the shared computer, said the identification processing including utilizing a terminal number via which the at least one terminal is connected, the identification processing enciphering a received key code via use of the ~~identifier~~ terminal number as an encryption key,

wherein the security unit comprises:

an enciphering unit that executes an enciphering processing local to each terminal, of data that has been transmitted from any one terminal and received by the switching device;

a first deciphering unit that executes a deciphering processing corresponding to the enciphering processing local to the at least one terminal corresponding to the at least one private computer, of the data that has been output from the switching device to any one private computer; and

a second deciphering unit that executes a deciphering processing corresponding to the enciphering processing local to the at least one terminal currently connected to the shared computer, of the data that has been output from the switching device to the shared computer,

wherein the enciphering unit bit shifts the received data to a first direction between a highest bit and a lowest bit by only a ~~number of each terminal~~ each terminal number,

the first deciphering unit bit shifts an output data to a second direction opposite to the first direction by the ~~number of a terminal~~ terminal number corresponding to the at least one private computer, and

the second deciphering unit bit shifts the output data to a second direction opposite to the first direction by the ~~number of a terminal~~ terminal number currently connected to the shared computer.

4. (previously presented) The switching device according to Claim 1, wherein the connecting unit comprises:

a detecting unit that detects whether or not a key code of a predetermined key transmitted from any terminal has been received in a predetermined number during a predetermined period of time; and

a switching unit that cancels a connection of the terminal when the terminal has been connected to the shared computer;

switches the connection to a private computer corresponding to the terminal;

that cancels a connection of the terminal when the terminal has been connected to a private computer corresponding to the terminal;

switches the connection to the shared computer;

that disregards a connection switching request when a terminal other than a corresponding terminal has already been connected to the shared computer, at a time when the detecting unit has performed detecting.

5. (previously presented) The switching device according to Claim 1, further comprising a posting unit that posts a connection status of the shared computer to each terminal.

6. (previously presented) The switching device according to Claim 5, wherein the posting unit posts to each terminal, that the shared computer is currently being used, when the shared computer is currently being connected to any terminal.

7. (previously presented) A switching method for a switching device controlling a connection between at least one private computer, at least one terminal corresponding to the at least one private computer, and a shared computer that can be operated by the at least one terminal, the switching method comprising:

connecting in a default position each terminal to a corresponding private computer and a connection destination of the terminal is switched to a private computer corresponding to the terminal or the shared computer when a connection switching request transmitted from the terminal has been received; and

identification processing for each terminal executed on data that has been received from any one terminal and output to the at least one private computer or the shared computer, the identification processing including utilizing an identifier corresponding to a connector through

which the at least one terminal is connected, the identification processing enciphering a received key code via use of the identifier as an encryption key.

8. (previously presented) The switching method according to Claim 7, wherein a security comprises:

enciphering processing of each terminal executed on the data that has been transmitted from any one terminal and received by the switching device;

deciphering processing corresponding to the enciphering processing of the at least one terminal corresponding to the at least one private computer executed of the data that has been output from the switching device to any one private computer; and

deciphering processing corresponding to the enciphering processing of the at least one terminal currently connected to the shared computer executed for data that has been output from the switching device to the shared computer.

9. (currently amended) A switching method for a switching device controlling a connection between at least one private computer, at least one terminal corresponding to the at least one private computer, and a shared computer that can be operated by the at least one terminal, the switching method comprising:

connecting in a default position each terminal to a corresponding private computer and a connection destination of the terminal is switched to a private computer corresponding to the terminal or the shared computer when a connection switching request transmitted from the terminal has been received; and

identification processing for each terminal executed on data that has been received from any one terminal and output to the at least one private computer or the shared computer, the identification processing including utilizing a terminal number via which the at least one terminal is connected, the identification processing enciphering a received key code via use of the identifier-terminal number as an encryption key,

wherein a security comprises:

enciphering processing of each terminal executed on the data that has been transmitted from any one terminal and received by the switching device;

deciphering processing corresponding to the enciphering processing of the at least one terminal corresponding to the at least one private computer executed of the data that has been output from the switching device to any one private computer; and

deciphering processing corresponding to the enciphering processing of the at least one terminal currently connected to the shared computer executed for data that has been output from the switching device to the shared computer,

wherein during the enciphering processing , the received data is bit shifted to a first direction between a highest bit and a lowest bit by only a ~~number of each terminal~~ each terminal number,

during the first deciphering processing, an output data is bit shifted to a second direction opposite to the first direction by the ~~number of a terminal~~ terminal number corresponding to the at least one private computer, and

during the second deciphering processing, the output data is bit shifted to a second direction opposite to the first direction by the ~~number of a terminal~~ terminal number currently connected to the shared computer.

10. (currently amended) The switching method according to Claim 7, wherein the connection comprises:

detecting whether or not a key code of a predetermined key transmitted from any terminal has been received by a predetermined number during a predetermined period of time; and

switching during which a connection of the terminal is ~~canceled~~ cancelled when the terminal has been connected to the shared computer;

the connection is switched to a private computer corresponding to the terminal;

a connection of the terminal is ~~canceled~~ cancelled when the terminal has been connected to a private computer corresponding to the terminal;

the connection is switched to the shared computer; and

a connection switching request is disregarded when a terminal other than a corresponding terminal has already been connected to the shared computer, at the time when the above detection has been carried out during the detecting.

11. (previously presented) The switching method according to Claim 7, further comprising posting a connection status of the shared computer to each terminal.

12. (previously presented) The switching method according to Claim 11, wherein during the posting, a state that the shared computer is currently being used is posted to each terminal, when the shared computer is currently connected to any terminal.

13. (previously presented) A computer system comprising:
at least one private computer;
at least one terminal corresponding to the at least one private computer;
at least one shared computer connected to a network; and
a switching device disposed between the at least one private computer and the at least one terminal, for relaying data between the at least one terminal and the at least one shared computer, the switching device comprising:
a connecting unit that connects in a default position each terminal to a corresponding private computer and switches a connection destination of the at least one terminal to a private computer corresponding to the at least one terminal or the at least one shared computer when a connection switching request transmitted from the at least one terminal has been received; and
a security unit that executes, for each terminal, identification processing on data that has been received from any one terminal and output to the at least one private computer or the at least one shared computer, the identification processing including utilizing an identifier corresponding to a connector through which the at least one terminal is connected, the identification processing enciphering received key code via use of the identifier as an encryption key.
14. (previously presented) The computer system according to Claim 13, wherein the at least one shared computer is connected to a second network independent of the network.
15. (original) The computer system according to Claim 13, wherein the network is the Internet.
16. (previously presented) The computer system according to Claim 14, wherein the second network is an intranet.
17. (previously presented) A computer system comprising:
at least one private computer;
at least one terminal corresponding to the at least one private computer;
at least one shared computer connected to a network; and

a switching device disposed between the at least one private computer and the at least one terminal, for relaying data between the at least one terminal and the at least one shared computer, the switching device comprising:

a connecting unit that connects in a default position each terminal to a corresponding private computer and switches a connection destination of the at least one terminal to a private computer corresponding to the at least one terminal or the at least one shared computer when a connection switching request transmitted from the at least one terminal has been received; and

a security unit that executes, for each terminal, identification processing on data that has been received from any one terminal and output to the at least one private computer or the at least one shared computer, the identification processing including utilizing an identifier corresponding to a connector through which the at least one terminal is connected, the identification processing enciphering a received key code via use of the identifier as an encryption key, the security unit comprising:

an enciphering unit that executes an enciphering processing of each terminal, of the data that has been transmitted from any one terminal and received by the switching device;

a first deciphering unit that executes a deciphering processing corresponding to the enciphering processing of the at least one terminal corresponding to the at least one private computer, on the data that has been output from the switching device to any one private computer; and

a second deciphering unit that executes a deciphering processing corresponding to the enciphering processing local to the at least one terminal currently connected to the at least one shared computer, on the data that has been output from the switching device to the at least one shared computer.

18. (previously presented) The computer system according to Claim 17, wherein the at least one shared computer is connected to a second network independent of the network.

19. (original) The computer system according to Claim 17, wherein the network is the Internet.

20. (previously presented) The computer system according to Claim 18, wherein the second network is an intranet.

21. (currently amended) A computer system comprising:

at least one private computer;

at least one terminal corresponding to the at least one private computer;

at least one shared computer connected to a network; and

a switching device disposed between the at least one private computer and the at least one terminal, for relaying data between the at least one terminal and the at least one shared computer, the switching device comprising:

a connecting unit that connects in a default position each terminal to a corresponding private computer and switches a connection destination of the at least one terminal to a private computer corresponding to the at least one terminal or the at least one shared computer when a connection switching request transmitted from the at least one terminal has been received; and

a security unit that executes, for each terminal, identification processing on the data that has been received from any one terminal and output to the at least one private computer or the at least one shared computer, the identification processing including utilizing a terminal number via which the at least one terminal is connected, the identification processing enciphering a received key code via use of the ~~identifier~~ terminal number as an encryption key, the security unit comprising:

an enciphering unit that executes an enciphering processing of each terminal, on the data that has been transmitted from any one terminal and received by the switching device, the enciphering unit for bit shifting the received data in a first direction between a highest bit and a lowest bit by ~~the number of each terminal~~ each terminal number;

a first deciphering unit that executes a deciphering processing corresponding to the enciphering processing of the at least one terminal corresponding to the at least one private computer, on the data that has been output from the switching device to any one private computer, the first deciphering unit for bit shifting the output data to a second direction opposite to the first direction by the ~~number of a terminal~~ terminal number corresponding to the at least one private computer; and

a second deciphering unit that executes a deciphering processing corresponding to the enciphering processing of the at least one terminal currently connected to the at least one shared computer, on data that has been output from the switching device to the at least one shared computer, the second deciphering unit for bit shifting output data to a second direction opposite to the first direction by the ~~number of a terminal~~ terminal number currently connected to the at least one private computer.

22. (previously presented) The computer system according to Claim 21, wherein the at least one shared computer is connected to a second network independent of the network.

23. (original) The computer system according to Claim 21, wherein the network is the Internet.

24. (previously presented) The computer system according to Claim 22, wherein the second network is an intranet.

25. (previously presented) A computer system comprising:
at least one private computer;
at least one terminal corresponding to the at least one private computer;
at least one shared computer connected to a network; and
a switching device disposed between the at least one private computer and the at least one terminal, for relaying data between the at least one terminal and the at least one shared computer, the switching device comprising:
a connecting unit that connects in a default position each terminal to a corresponding private computer and switches a connection destination of the at least one terminal to a private computer corresponding to the at least one terminal or the at least one shared computer when a connection switching request transmitted from the at least one terminal has been received, the connecting unit comprising:
a detecting unit that detects whether or not a key code of a predetermined key transmitted from any terminal has been received in a predetermined number during a predetermined period of time; and
a switching unit that cancels a connection of the at least one terminal when the at least one terminal has been connected to the at least one shared computer;
switches the connection to a private computer corresponding to the at least one terminal;
that cancels a connection of the at least one terminal when the at least one terminal has been connected to a private computer corresponding to the at least one terminal;
switches the connection to the at least one shared computer; and

that disregards a connection switching request when a terminal other than a corresponding terminal has already been connected to the at least one shared computer, at the time when the detecting unit has performed detecting; and

a security unit that executes, for each terminal, identification processing on the data that has been received from any one terminal and output to the at least one private computer or the at least one shared computer, the identification processing including utilizing an identifier corresponding to a connector through which a terminal is connected, the identification processing enciphering a received key code via use of the identifier as an encryption key.

26. (previously presented) The computer system according to Claim 25, wherein the at least one shared computer is connected to a second network independent of the network.

27. (original) The computer system according to Claim 25, wherein the network is the Internet.

28. (previously presented) The computer system according to Claim 26, wherein the second network is an intranet.

29. (previously presented) A computer system comprising:

- at least one private computer;
- at least one terminal corresponding to the at least one private computer;
- at least one shared computer connected to a network; and
- a switching device disposed between the at least one private computer and the at least one terminal, for relaying data between the at least one terminal and the at least one shared computer, the switching device comprising:
 - a connecting unit that connects in a default position each terminal to a corresponding private computer and switches a connection destination of the at least one terminal to a private computer corresponding to the at least one terminal or the at least one shared computer when a connection switching request transmitted from the at least one terminal has been received;
 - a security unit that executes, for each terminal, identification processing on data that has been received from any one terminal and output to the at least one private computer or the at least one shared computer, the identification processing including utilizing an identifier corresponding to a connector through which the at least one terminal is connected, the

identification processing enciphering a received key code via use of the identifier as an encryption key; and

a posting unit that posts a connection status of the at least one shared computer to each terminal.

30. (previously presented) The computer system according to Claim 29, wherein the at least one shared computer is connected to a second network independent of the network.

31. (original) The computer system according to Claim 29, wherein the network is the Internet.

32. (previously presented) The computer system according to Claim 30, wherein the second network is an intranet.

33. (previously presented) A computer system comprising:
at least one private computer;
at least one terminal corresponding to the at least one private computer;
at least one shared computer connected to a network; and
a switching device disposed between the at least one private computer and the at least one terminal, for relaying data between the at least one terminal and the at least one shared computer, the switching device comprising:
a connecting unit that connects in a default position each terminal to a corresponding private computer and switches a connection destination of the at least one terminal to a private computer corresponding to the at least one terminal or the at least one shared computer when a connection switching request transmitted from the at least one terminal has been received;
a security unit that executes, for each terminal, identification processing of the data that has been received from any one terminal and output to the at least one private computer or the at least one shared computer, the identification processing including utilizing an identifier corresponding to a connector through which the at least one terminal is connected, the identification processing enciphering a received key code via use of the identifier as an encryption key; and
a posting unit that posts a connection status of the shared computer to each terminal, the posting unit for posting to each terminal that the at least one shared computer is currently

being used, when the at least one shared computer is currently being connected to any terminal.

34. (previously presented) The computer system according to Claim 33, wherein the at least one shared computer is connected to a second network independent of the network.

35. (original) The computer system according to Claim 33, wherein the network is the Internet.

36. (previously presented) The computer system according to Claim 34, wherein the second network is an intranet.

37. (previously presented) A switching device for controlling a terminal connection, comprising:

a connection unit connecting in a default position a terminal to a private computer or a shared computer; and

an identification processing unit coupled to the connection unit utilizing an identifier corresponding to a connector through which the terminal is connected, the identification processing enciphering a received code via use of the identifier as an encryption key.

38. (previously presented) A switching device for controlling a terminal connection, comprising:

a connection unit connecting a terminal of a plurality of terminals to a one of a plurality of private computers, each terminal of the plurality of terminals connects in a default position to only one corresponding private computer of the plurality of private computers or a network computer, at any instance only one of the terminals of the plurality of terminals may be connected to the network computer; and

an identification processing unit coupled to the connection unit utilizing an identifier corresponding to a connector through which the terminal is connected as an enciphering key, the identification processing unit enciphering a received key code.

39. (new) A system for controlling terminal connections, the system comprising:
a single shared computer;
a plurality of private computers;

a plurality of terminals, each terminal corresponds to only one of a private computer of the plurality of private computers;

a connection unit which connects the terminal to the corresponding private computer and upon receiving a switching request switches the terminal to the single network computer where only a single terminal is connected to the single network computer at one time; and

an identification processing unit coupled to the connection unit utilizing a connector identification number corresponding to a connector through which the terminal is connected as an enciphering key, the identification processing unit enciphering a received key code,

wherein said connector identification number is stored in RAM of both said shared computer and said private computer connected by said connection unit.